

In the claims:

1. (Previously amended) A method for generating a polynucleotide sequence or population of sequences from parent single stranded polynucleotide sequences encoding one or more protein motifs, comprising the steps of:

a) providing single stranded polynucleotide sequences constituting plus and minus strands of parent polynucleotide sequences;

b) digesting the single stranded polynucleotide sequences with an exonuclease to generate a first population of single stranded fragments comprising fragments generated from the plus strands and a second population of single stranded fragments comprising fragments generated from the minus strands, said second population being separate from said first population;

c) contacting said first population of single stranded fragments with said second population of single stranded fragments, whereby annealing occurs between said first population of single stranded fragments and said second population of single stranded fragments;

d) amplifying the fragments that anneal to each other to generate at least one polynucleotide sequence encoding one or more protein motifs having altered characteristics as compared to the one or more protein motifs encoded by said parent polynucleotides.

2. (Currently amended) The method as claimed in claim 1 wherein step (c) ~~optionally~~ further comprises adding primer sequences that anneal to the 3' and 5' ends of at least one of the parent polynucleotides under annealing conditions.

3. (Previously amended) A method as claimed in Claim 1 wherein the exonuclease is BAL31.

4. (Original) A method as claimed in Claim 1 wherein a parent polynucleotide sequence or sequences has been subjected to mutagenesis.

5. (Original) A method as claimed in Claim 1 wherein the population of fragments generated in step b) are subjected to mutagenesis.

6. (Original) A method as claimed in Claim 4 wherein mutagenesis is error prone PCR.

7. (Previously presented) The method as claimed in claim 1, further comprising contacting the polynucleotide sequence of step d) with primer sequences that anneal to the 3' and 5' ends of at least one of the parent polynucleotides under annealing conditions and amplifying those hybrids that anneal to each other to generate a further polynucleotide sequence encoding one or more protein motifs having altered characteristics as compared to one or more protein motifs encoded by said parent polynucleotide.